

MAYOR & COUNCIL AGENDA COVER SHEET

MEETING DATE:

September 13, 2004

CALL TO PODIUM:

Jim Arnoult

RESPONSIBLE STAFF:

Jim Arnoult
Cathy Borten
Mark DePoe
Fred Felton
Greg Ossont

AGENDA ITEM:

(please check one)

	Presentation
	Proclamation/Certificate
	Appointment
	Public Hearing
	Historic District
	Consent Item
	Ordinance
	Resolution
	Policy Discussion
X	Work Session Discussion Item
	Other:

PUBLIC HEARING HISTORY:

(Please complete this section if agenda item is a public hearing)

Introduced	
Advertised	
Hearing Date	
Record Held Open	
Policy Discussion	

TITLE:

Discussion Concerning a Possible Transportation Adequate Public Facilities Ordinance

SUPPORTING BACKGROUND:

During our discussions on the Master Plan Transportation Theme, the Mayor and City Council discussed the possibility of developing an adequate public facilities ordinance for transportation.

In the past, the City has required traffic studies for most major development projects and negotiated for appropriate road improvements; however, we do not have formal guidelines or requirements.

The attached memorandum from Engineering Services Director Mumpower provides an overview of transportation studies, a description of transportation Levels of Service (LOS), and a description of Critical Lane Volumes (CLV). For your review, we have also attached data concerning existing CLV analyses for key intersections.

Please also find several relevant sections of the July 1, 2004 *Local Area Transportation Review Guidelines* developed by the Montgomery County Planning Board.

We have also attached a preliminary draft of a Transportation Adequate Public Facilities Ordinance that provides a number of policy options staff would like to review with the Mayor and City Council and the Planning Commission. The key issues can be summarized as follows:

- Process for waivers
- Process for designating what critical intersections or links must be studied
- Guidelines for parameters of traffic study
- Traffic mitigation thresholds

Attachments:

1. Memorandum from Ollie Mumpower dated 9/9/04
2. CLV data for key intersections
3. Portions of the Planning Boards 7/1/04 LAR Guidelines
4. Draft Ordinance

DESIRED OUTCOME:

Hear presentation and provide guidance to staff.

done by measuring the "levels of service" (LOS) on the surrounding roads and intersections. These "levels of service", are indicated by letters ranging from "A" (free flowing) to "F" (exceeds capacity). For intersections numerical representations of these are shown as either:

critical lane volumes (CLV) or

a volume over capacity percentage (V/C) where:

- V= the CLV of the intersection in question and
- C = 1600 (the upper CLV limit of LOS E).

These six levels of service recognized by transportation planners and engineers are described as follows:

LEVEL OF SERVICE	CLV RANGE	V/C RANGE	DESCRIPTION	LOCAL EXAMPLE
A	<1000	< 0.63	Free flow traffic. This is the LOS experienced on most residential streets on a daily basis. For many major roadways this is typical of nighttime traffic conditions from 11PM to 6 AM.	<u>MD 117 at Watkins Mill Rd.</u> <u>PM rush hour</u> CLV – 998 V/C-- 0.62
B	1001 to 1150	0.63 to 0.72	Stable traffic flow	<u>MD 355 at Watkins Mill Rd.</u> <u>PM rush hour</u> CLV – 1057 V/C—0.66
C	1151 to 1300	0.72 to 0.81	Flow that remains stable but interacts with others. This is often considered normal traffic flow on many major roadways during off peak day time operations	<u>MD 355 at Summit Avenue.</u> <u>AM rush hour</u> CLV – 1208 V/C—0.76
D	1301 to 1450	0.81 to 0.91	High-density flow in which speed and freedom to maneuver may be impacted. This is typical of peak hour conditions on many major roadways.	<u>MD 124/MD 355</u> <u>AM rush hour</u> CLV-1409 V/C – 0.88
E	1451 to 1600	0.91 to 1.00	High density flow approaching or near capacity levels. Up to mid range of this level (CLV 1525, V/C of 0.95) is also typical of peak hour conditions on some of the major roadways in this area.	<u>MD 124/MD 355</u> <u>PM rush hour</u> CLV-1540 V/C – 0.96
F	>1601	> 1.0	Forced traffic flow in which the amount of traffic exceeds the amount that can be served without excessive delay.	<u>MD 119 at Muddy Branch Rd.</u> <u>PM rush hour</u> (Prior to ongoing modifications) CLV – 1829 V/C—1.14

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CRITICAL LANE VOLUME (CLV) METHODOLOGY**for Montgomery County**

Intersection of: MD 117

Date of Count: 3/16/2004

and: Longdraft Rd

Day of Week: Tuesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li

**Lane Use + Traffic Volumes**

AM Peak: 7:30-8:30

PM Peak: 4:45-5:45

LONGDRAFT RD

29	17	32	PM
32	34	122	AM
R	T	L	

TR LT

| |

MD 117

— TR

— T

— L

R	26	104
T	254	1445
L	27	64
AM	PM	

PM	AM	
18	15	L
484	1224	T
39	111	R

L —

T —

TR —

| |
LT R

MD 117

	L	T	R
AM	36	7	84
PM	167	31	43

LONGDRAFT RD

Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	57	1.00	57	122	1.00	122	179
SB	188	0.53	100	36	1.00	36	
EB	1335	0.53	708	27	1.00	27	735
WB	280	0.53	148	15	1.00	15	
CLV TOTAL=							914
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	198	1.00	198	32	1.00	32	230
SB	78	0.53	41	167	1.00	167	
EB	523	0.53	277	64	1.00	64	839
WB	1549	0.53	821	18	1.00	18	
CLV TOTAL=							1069
Level of Service (LOS) =							B

Scenario ID - EXIST6

AM V/C = 0.57

PM V/C = 0.67

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 117

Date of Count: 3/9/2004

and: Muddy Branch Rd

Day of Week: Tuesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 7:30-8:30

PM Peak: 5:00-6:00

MUDDY BRANCH RD

197	337	2	PM
133	265	2	AM
R	T	L	

R LT
| |

MD 117

-- T
-- T
-- L

R	0	0
T	171	213
L	69	91
	AM	PM

PM	AM	
0	0	L
459	390	T
392	294	R

T --
T --
R --

| |
L R

MD 117

	L	T	R
AM	340	0	258
PM	346	0	623

MUDDY BRANCH RD

Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	189	1.00	189	2	1.00	2	607
SB	267	1.00	267	340	1.00	340	
EB	390	0.53	207	69	1.00	69	276
WB	171	0.53	91	0	0.00	0	
CLV TOTAL=							883
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	532	1.00	532	2	1.00	2	685
SB	339	1.00	339	346	1.00	346	
EB	459	0.53	243	91	1.00	91	334
WB	213	0.53	113	0	0.00	0	
CLV TOTAL=							1019
Level of Service (LOS)=							B

Scenario ID - EXIST1

AM V/C = 0.55

PM V/C = 0.64

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CRITICAL LANE VOLUME (CLV) METHODOLOGY**for Montgomery County****Intersection of: MD 124****and: Goshen Rd****Conditions: 2004 Existing Traffic****Date of Count: 3/16/2004****Day of Week: Tuesday****Analyst: Shulin Li****Lane Use + Traffic Volumes**

AM Peak: 7:15-8:15

PM Peak: 5:00-6:00

**GOSHEN RD**

157	354	84	PM
158	572	382	AM
R	T	L	

R	T	L	L

MD 124

--- R
--- T
--- T
--- L

R	65	317
T	428	672
L	152	262
	AM	PM

PM	AM	
309	41	L
572	703	T
65	59	R

L ---
T ---
T ---
R ---

L	T	TR

MD 124

	L	T	R
AM	43	254	161
PM	112	667	288

GOSHEN RD**Capacity Analysis**

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	415	0.53	220	382	0.53	202	615
SB	572	1.00	572	43	1.00	43	
EB	703	0.53	373	152	1.00	152	525
WB	428	0.53	227	41	1.00	41	
CLV TOTAL=							1140
Level of Service (LOS) =							B

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	955	0.53	506	84	0.53	45	551
SB	354	1.00	354	112	1.00	112	
EB	572	0.53	303	262	1.00	262	665
WB	672	0.53	356	309	1.00	309	
CLV TOTAL=							1216
Level of Service (LOS) =							C

Scenario ID - EXIST12

AM V/C = 0.71

PM V/C = 0.76

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 124

and: MD 28

Conditions: 2004 Existing Traffic

Date of Count: 3/16/2004

Day of Week: Tuesday

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 7:00-8:00

PM Peak: 5:00-6:00

MD 124

169	250	479	PM
188	367	189	AM
R	T	L	

R	T	LT	L

MD 28

-- R
-- T
-- T
-- L
-- L

R	75	168
T	148	845
L	136	120
	AM	PM

PM	AM	
224	342	L
313	773	T
75	59	R

L --
L --
T --
T --
R --

| | | |
L LT T R

MD 28

	L	T	R
AM	42	263	119
PM	96	291	67

MD 124

Capacity Analysis - North/South Split

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	263	0.53	139			
SB	556	0.37	206			
EB	773	0.53	410	136	0.53	72
WB	148	0.53	78	342	0.53	181
						482
						CLV TOTAL= 827
						Level of Service (LOS) = A

CLV TOTAL= 827

Level of Service (LOS) = A

AM V/C = 0.52

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	291	0.53	154			
SB	729	0.37	270			
EB	313	0.53	166	120	0.53	64
WB	845	0.53	448	224	0.53	119
						567
						CLV TOTAL= 991
						Level of Service (LOS) = A

CLV TOTAL= 991

Level of Service (LOS) = A

PM V/C = 0.62

Scenario ID - EXIST16

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 355

Date of Count: 3/16/2004

and: Shady Grove Rd

Day of Week: Tuesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 8:00-9:00

PM Peak: 5:00-6:00

MD 355

233	764	181	PM
749	2021	281	AM
R	T	L	

R	T	T	T	L

SHADY GROVE RD

-- TR

-- T

-- T

-- LT

-- L

-- L

R	237	518
T	935	363
L	616	228
	AM	PM

L --

L --

LT --

T --

T --

R --

PM	AM	
792	185	L
1232	397	T
473	606	R

L	T	T	T	T	R
---	---	---	---	---	---

SHADY GROVE RD

	L	T	R
AM	187	785	179
PM	234	2029	414

MD 355

Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	419	1.00	419				419
WB	1788	0.25	447				447
NB	785	0.30	236	281	1.00	281	935
SB	2021	0.37	748	187	1.00	187	
CLV TOTAL=							1801
Level of Service (LOS) =							F

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	2024	0.25	506				506
WB	337	1.00	337				337
NB	2029	0.30	609	181	1.00	181	790
SB	764	0.37	283	234	1.00	234	
CLV TOTAL=							1633
Level of Service (LOS) =							F

Scenario ID - EXIST10

AM V/C = 1.13

PM V/C = 1.02

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 119

Date of Count: 3/16/2004

and: Muddy Branch Rd

Day of Week: Tuesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 8:00-9:00

PM Peak: 5:00-6:00

MUDDY BRANCH RD

380	495	138	PM
147	299	188	AM
R	T	L	

RT	T	L

MD 119

— R	R	79	143
— T	T	563	1892
— T	L	114	200
— L	AM	PM	

PM	AM	
203	78	L
772	2491	T
177	87	R

L	—
T	—
T	—
R	—

L	T	T	R

MD 119

	L	T	R
AM	110	278	386
PM	159	331	190

MUDDY BRANCH RD

Capacity Analysis

Morning Peak Hour								
Dir	Thru Volumes			+ Opposing Lefts			AM	
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV	
NB	272	1.00	272	188	1.00	188	460	
SB	446	0.53	236	110	1.00	110		
EB	2491	0.53	1320	114	1.00	114	1434	
WB	563	0.53	298	78	1.00	78		
CLV TOTAL=							1894	
Level of Service (LOS)=							F	

CLV TOTAL= 1894

Level of Service (LOS)= F

AM V/C = 1.18

Evening Peak Hour								
Dir	Thru Volumes			+ Opposing Lefts			PM	
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV	
NB	331	0.53	175	138	1.00	138	623	
SB	875	0.53	464	159	1.00	159		
EB	772	0.53	409	200	1.00	200	1206	
WB	1892	0.53	1003	203	1.00	203		
CLV TOTAL=							1829	
Level of Service (LOS) =							F	

CLV TOTAL= 1829

Level of Service (LOS)= F

PM V/C = 1.14

Scenario ID - EXIST13

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 119

and: Sam Eig Hwy

Conditions: 2004 Existing Traffic

Date of Count: 3/16/2004

Day of Week: Tuesday

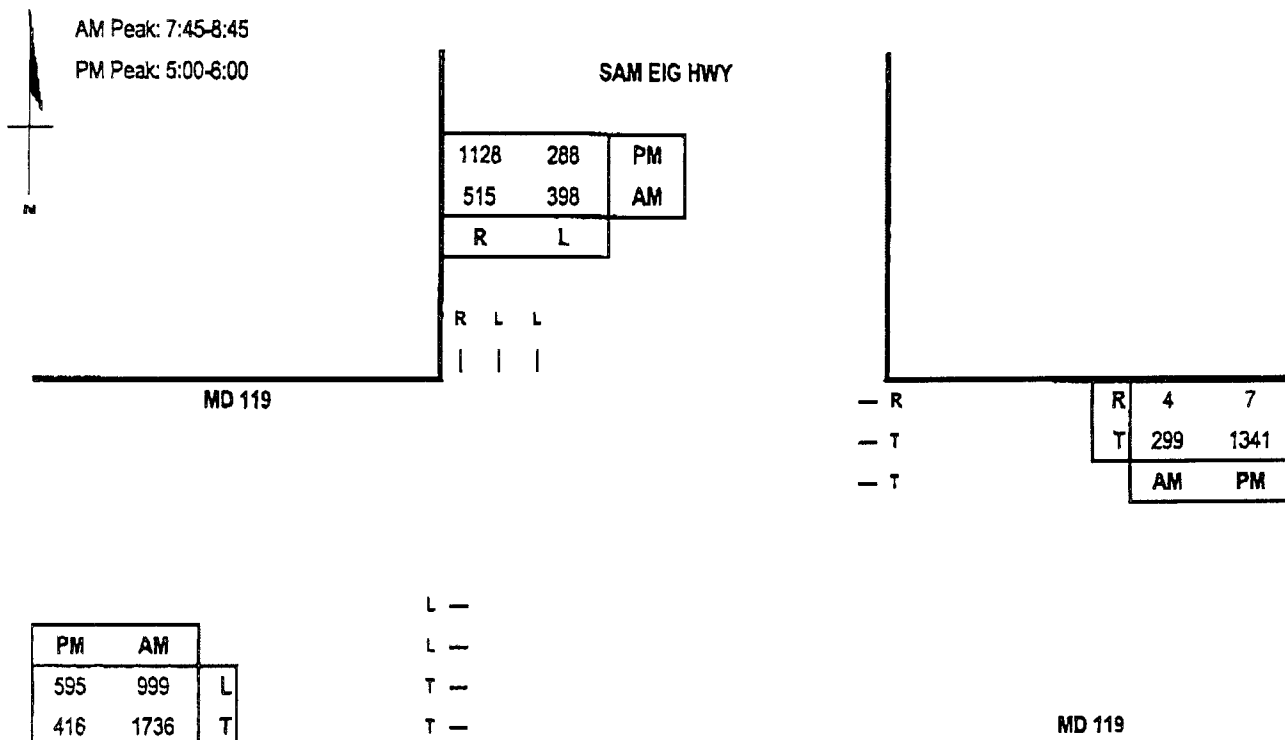
Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 7:45-8:45

PM Peak: 5:00-6:00



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	398	0.53	211			211
EB	1736	0.55	955			955
WB	299	0.53	158	999	0.53	529
CLV TOTAL=						1166
Level of Service (LOS)=						C

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	813	1.00	813			813
EB	416	0.55	229			1026
WB	1341	0.53	711	595	0.53	315
CLV TOTAL=						1839
Level of Service (LOS)=						F

Scenario ID - EXIST14

AM V/C = 0.73

PM V/C = 1.15

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 355

and: Deer Park Dr

Conditions: 2004 Existing Traffic

Date of Count: 3/10/2004

Day of Week: Wednesday

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 7:00-8:00

PM Peak: 5:00-6:00



DEER PARK RD

MD 355

97	1143	31	PM
45	2564	54	AM
R	T	L	

RT	T	T	L

--- TR

--- L

R	40	45
T	44	47
L	167	102
AM	PM	

PM	AM	
140	92	L
59	64	T
258	449	R

LT —

R —

R —

L	T	T	RT

DEER PARK DR

	L	T	R
AM	93	595	60
PM	432	2206	107

MD 355

Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			← Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	655	0.37	242	54	1.00	54	1058
SB	2609	0.37	965	93	1.00	93	
EB	156	1.00	156	167	1.00	167	323
WB	84	1.00	84	92	1.00	92	
CLV TOTAL=							1381
Level of Service (LOS)=							D

AM V/C = 0.86

Evening Peak Hour							
Dir	Thru Volumes			← Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	2313	0.37	856	31	1.00	31	891
SB	1240	0.37	459	432	1.00	432	
EB	199	1.00	199	102	1.00	102	301
WB	92	1.00	92	140	1.00	140	
CLV TOTAL=							1192
Level of Service (LOS)=							C

PM V/C = 0.75

Scenario ID - EXIST9

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: Woodfield Rd

Date of Count: 3/16/2004

and: Midcounty Hwy

Day of Week: Tuesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 7:00-8:00

PM Peak: 5:00-6:00



WOODFIELD RD

264	102	116	PM
170	121	526	AM
R	T	L	

R	T	L	L

MIDCOUNTY HWY

--- R
--- T
--- T
--- L

R	65	323
T	260	629
L	95	89
	AM	PM

PM	AM	
302	223	L
568	1152	T
16	7	R

L —
T —
T —
R —

| | |
L T R

MIDCOUNTY HWY

	L	T	R
AM	37	123	175
PM	26	101	82

SAYBROOKE BLVD,

Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	123	1.00	123	526	0.53	279
SB	121	1.00	121	37	1.00	37
EB	1152	0.53	611	95	1.00	95
WB	260	0.53	138	223	1.00	223
CLV TOTAL=						1108
Level of Service (LOS) =						B

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	101	1.00	101	116	0.53	61
SB	102	1.00	102	26	1.00	26
EB	568	0.53	301	89	1.00	89
WB	629	0.53	333	302	1.00	302
CLV TOTAL=						797
Level of Service (LOS) =						A

Scenario ID - EXIST17

AM V/C = 0.69

PM V/C = 0.5

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CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

Intersection of: MD 355

Date of Count: 3/16/2004

and: Watkins Mill Rd

Day of Week: Tuesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 7:45-8:45

PM Peak: 5:00-6:00



MD 355

991	189	PM
1752	342	AM
T	L	

T	T	T	L

— R	R	76	298
— L	L	256	126
— L		AM	PM

T	T	TR

WATKINS MILL RD

	T	R
AM	580	74
PM	1761	291

MD 355

Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			← Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	256	0.53	136				136
NB	654	0.37	242	342	1.00	342	648
SB	1752	0.37	648				
CLV TOTAL=							784
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			← Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	109	1.00	109				109
NB	2052	0.37	759	189	1.00	189	948
SB	991	0.37	367				
CLV TOTAL=							1057
Level of Service (LOS) =							B

Scenario ID - EXIST11

AM V/C = 0.49

PM V/C = 0.66

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 117

Date of Count: 3/11/2004

and: Watkins Mill Rd

Day of Week: Thursday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 8:00-9:00

PM Peak: 5:00-6:00

WATKINS MILL RD

167	23	213	PM
10	3	31	AM
R	T	L	

R	T	L

MD 117

— R
— T
— T
— L

R	242	26
T	342	1413
L	23	62
AM	PM	

PM	AM	
13	186	L
546	1120	T
16	33	R

L —
T —
TR —

L	T	TR

MD 117

	L	T	R
AM	7	10	61
PM	58	1	42

PHEASANT RUN DR

Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	71	0.53	38	31	1.00	31	69
SB	3	1.00	3	7	1.00	7	
EB	1153	0.53	611	23	1.00	23	634
WB	211	1.00	211	186	1.00	186	
CLV TOTAL=							703
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	43	0.53	23	213	1.00	213	236
SB	154	1.00	154	58	1.00	58	
EB	562	0.53	298	62	1.00	62	762
WB	1413	0.53	749	13	1.00	13	
CLV TOTAL=							998
Level of Service (LOS) =							A

Scenario ID - EXIST7

AM V/C = 0.44

PM V/C = 0.62

SLI, 2001-1110\GAITHERSBURGCOUNTS\4.XLS-CLV, 05/11/04

CRITICAL LANE VOLUME (CLV) METHODOLOGY**for Montgomery County**

Intersection of: MD 124 (montgomery Village Ave) Date of Count: 3/9/2004

and: MD 124 (midcounty Hwy)

Day of Week: Tuesday

Conditions: Existing Traffic

Analyst: Shulin Li

**Lane Use + Traffic Volumes**

AM Peak: 8:00-9:00

PM Peak: 5:00-6:00



MD 124 (MONTGOMERY VILLAGE AVE)

986	169	PM
1884	339	AM
T	L	

T	T	T	L	L

-- R	R	130	322
-- R	L	779	632
-- L	AM	PM	
-- L			

T	T	R

MD 124 (MIDCOUNTY HWY)

	T	R
AM	815	608
PM	2130	890

MD 124 (MONTGOMERY VILLAGE AVE)

Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	779	0.53	413			
NB	815	0.53	432	339	0.53	180
SB	1884	0.37	697			
CLV TOTAL=						1110
Level of Service (LOS)=						B

AM V/C = 0.69

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	632	0.53	335			
NB	2130	0.53	1129	169	0.53	90
SB	986	0.37	365			
CLV TOTAL=						1554
Level of Service (LOS)=						E

PM V/C = 0.97

SLI, 2001-1110\GAITHERSBURGCOUNTS\2.XLS-CLV, 05/11/04

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 355

Date of Count: 3/3/2004

and: MD 124

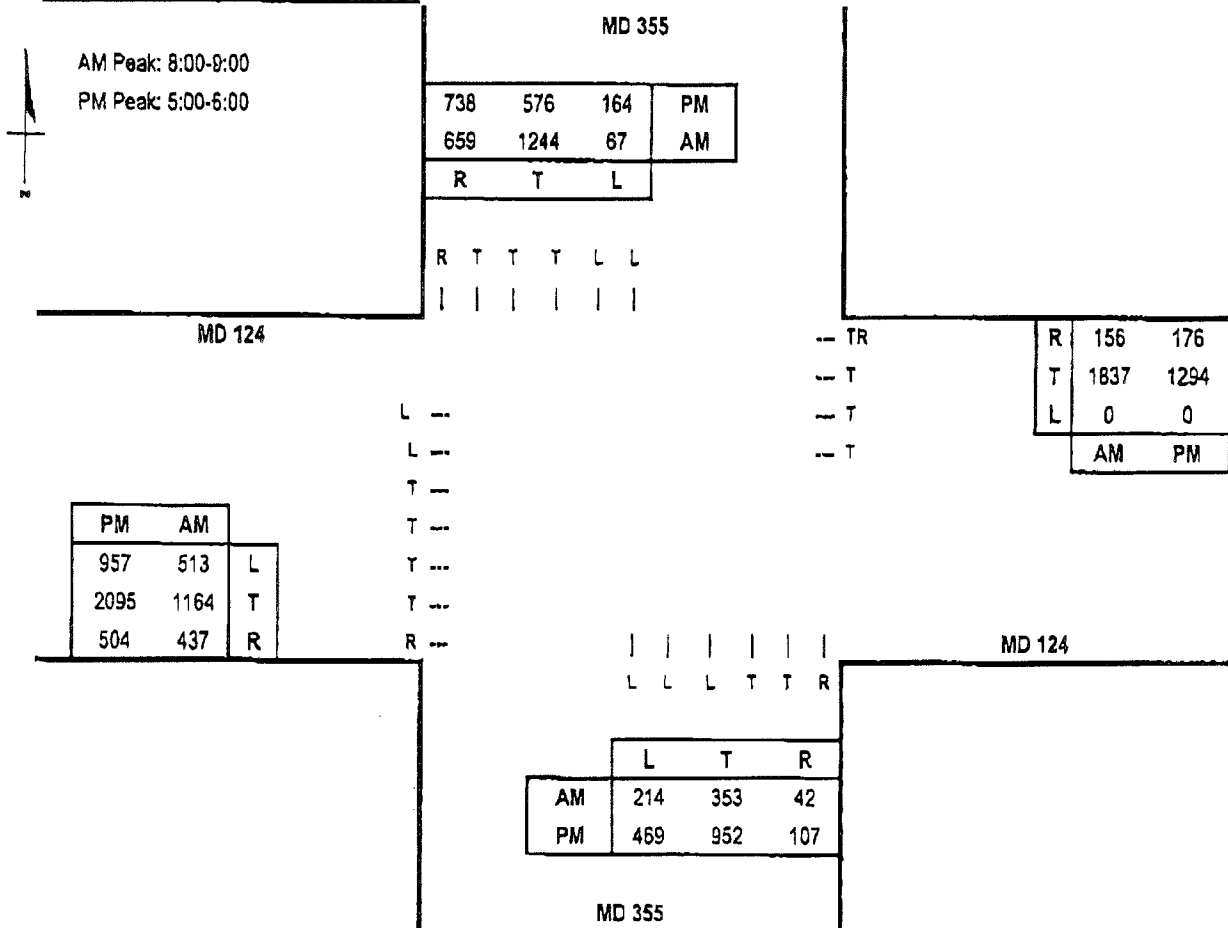
Day of Week: Wednesday

Conditions: Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	353	0.53	187	67	0.53	36	539
SB	1244	0.37	460	214	0.37	79	
EB	358	1.00	358	0	0.00	0	870
WB	1893	0.30	598	513	0.53	272	
CLV TOTAL=							1409
Level of Service (LOS) =							D

AM V/C = 0.88

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	952	0.53	505	164	0.53	87	592
SB	231	1.00	231	469	0.37	174	
EB	2095	0.30	629	0	0.00	0	948
WB	1470	0.30	441	957	0.53	507	
CLV TOTAL=							1540
Level of Service (LOS) =							E

PM V/C = 0.96

SLI, DOCUMENTS AND SETTINGS\SLI\TTC\INCMY DOCUMENTS\CAD\15.XLS-CLV, 03/18/04

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 119

and: MD 124

Conditions: 2004 Existing Traffic

Date of Count: 3/9/2004

Day of Week: Tuesday

Analyst: Shulin Li



Lane Use + Traffic Volumes

AM Peak: 8:00-9:00

PM Peak: 5:00-6:00



MD 119

139	462	95	PM
268	677	27	AM
R	T	L	

R	T	L

MD 124

— TR
— T
— L

R	25	41
T	1379	438
L	136	50
	AM	PM

PM	AM
260	153
1363	247
376	226

L —
T —
T —
R —

L	L	T	T	R

MD 124

	L	T	R
AM	206	347	27
PM	369	722	179

MD 119

Capacity Analysis - North/South Split

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	347	0.53	184			
SB	945	0.53	501			
EB	247	0.53	131	136	1.00	136
WB	1404	0.53	744	153	1.00	153
						897
CLV TOTAL=						1582
Level of Service (LOS)=						E

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	722	0.53	383			
SB	601	0.53	319			
EB	1363	0.53	722	50	1.00	50
WB	479	0.53	254	260	1.00	260
						772
CLV TOTAL=						1474
Level of Service (LOS)=						E

Scenario ID - EXIST15

AM V/C = 0.99

PM V/C = 0.92

SL, TEMP040313.XLS-CLV, 03/15/04

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 355

Date of Count: 3/10/2004

and: Lakeforest Blvd

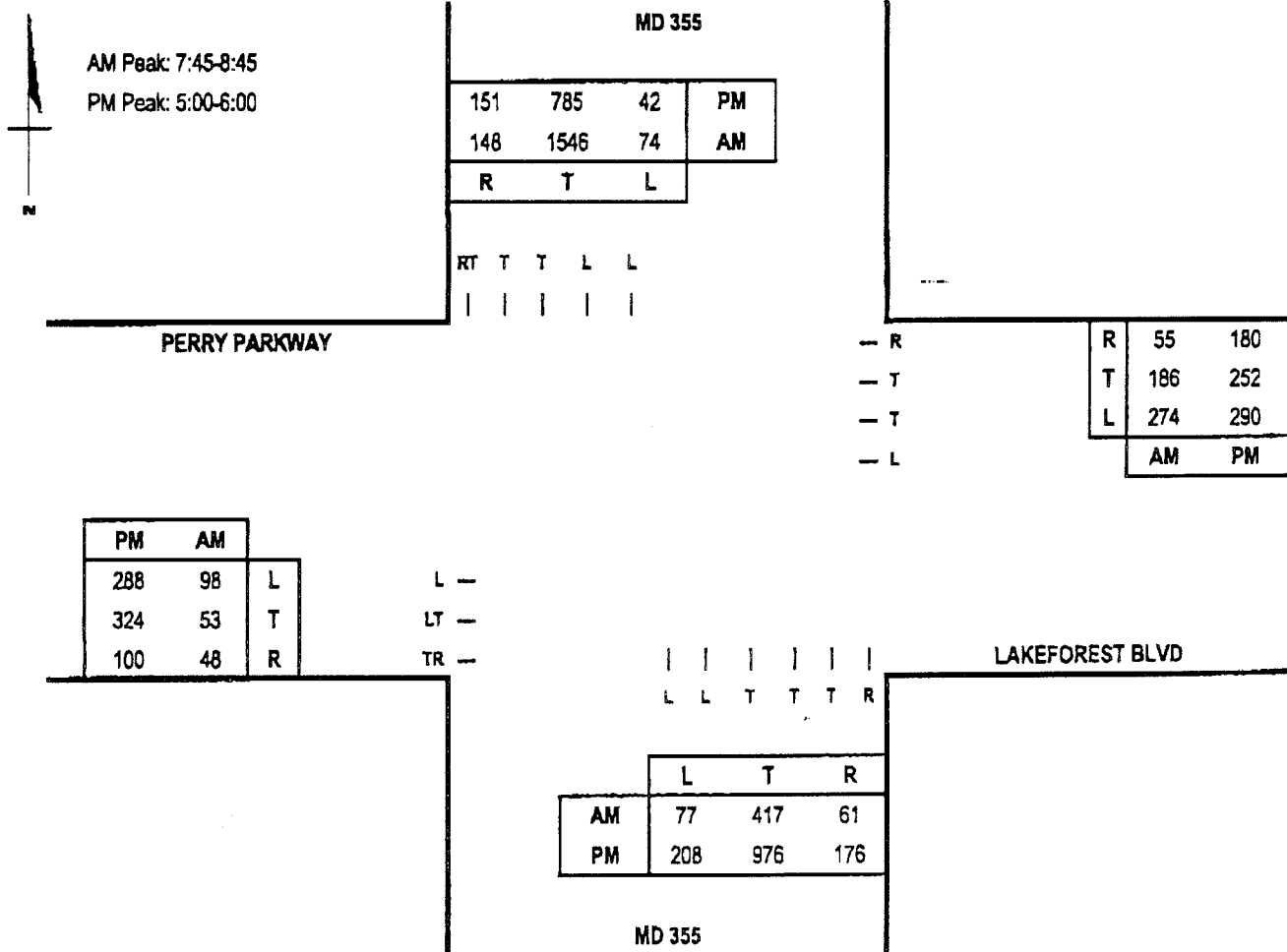
Day of Week: Wednesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes



Capacity Analysis - East/West Split

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	199	0.37	74			
WB	274	1.00	274			
NB	417	0.37	154	74	0.53	39
SB	1694	0.37	627	77	0.53	41
CLV TOTAL=						1016
Level of Service (LOS)=						B

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	712	0.37	263			
WB	290	1.00	290			
NB	976	0.37	361	42	0.53	22
SB	936	0.37	346	208	0.53	110
CLV TOTAL=						1009
Level of Service (LOS)=						B

Scenario ID - EXIST3

AM V/C = 0.64

PM V/C = 0.63

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CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 355

and: S Summit Ave

Conditions: 2004 Existing Traffic

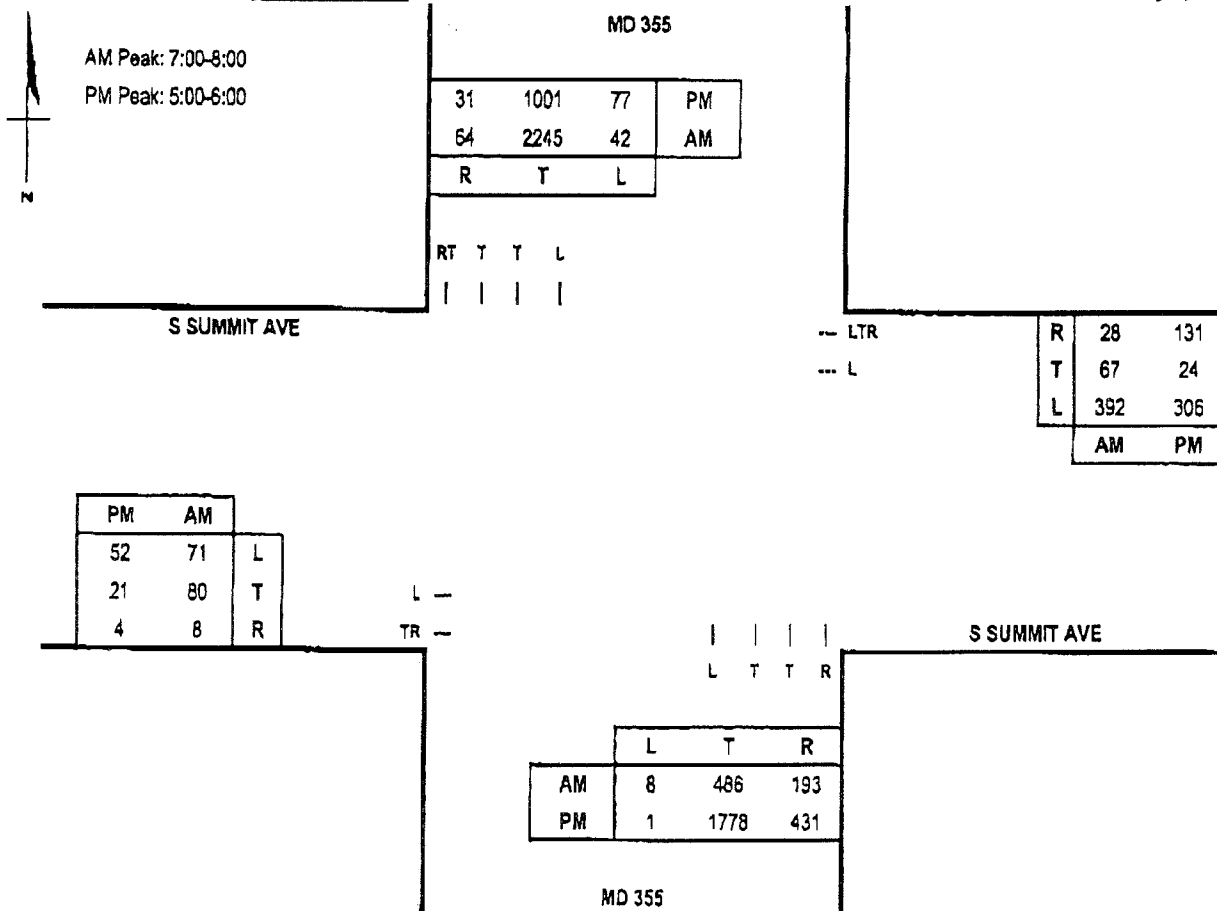
Date of Count: 3/9/2004

Day of Week: Tuesday

Analyst: Shulin LI



Lane Use + Traffic Volumes



Capacity Analysis - East/West Split

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	88	1.00	88			
WB	487	0.53	258			
NB	486	0.53	258	42	1.00	42
SB	2309	0.37	854	8	1.00	8
						862
						CLV TOTAL= 1208
						Level of Service (LOS)= C

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	52	1.00	52			
WB	481	0.53	244			
NB	1778	0.53	942	77	1.00	77
SB	1032	0.37	382	1	1.00	1
						1019
						CLV TOTAL= 1315
						Level of Service (LOS)= D

Scenario ID - EXIST16

AM V/C = 0.76

PM V/C = 0.82

SLI, MY DOCUMENTS\CAD\NEW FOLDER (2)\8.XLS-CLV, 05/14/04

CRITICAL LANE VOLUME (CLV) METHODOLOGY

for Montgomery County

Intersection of: MD 28

Date of Count: 2/24/2004

and: Muddy Branch Rd

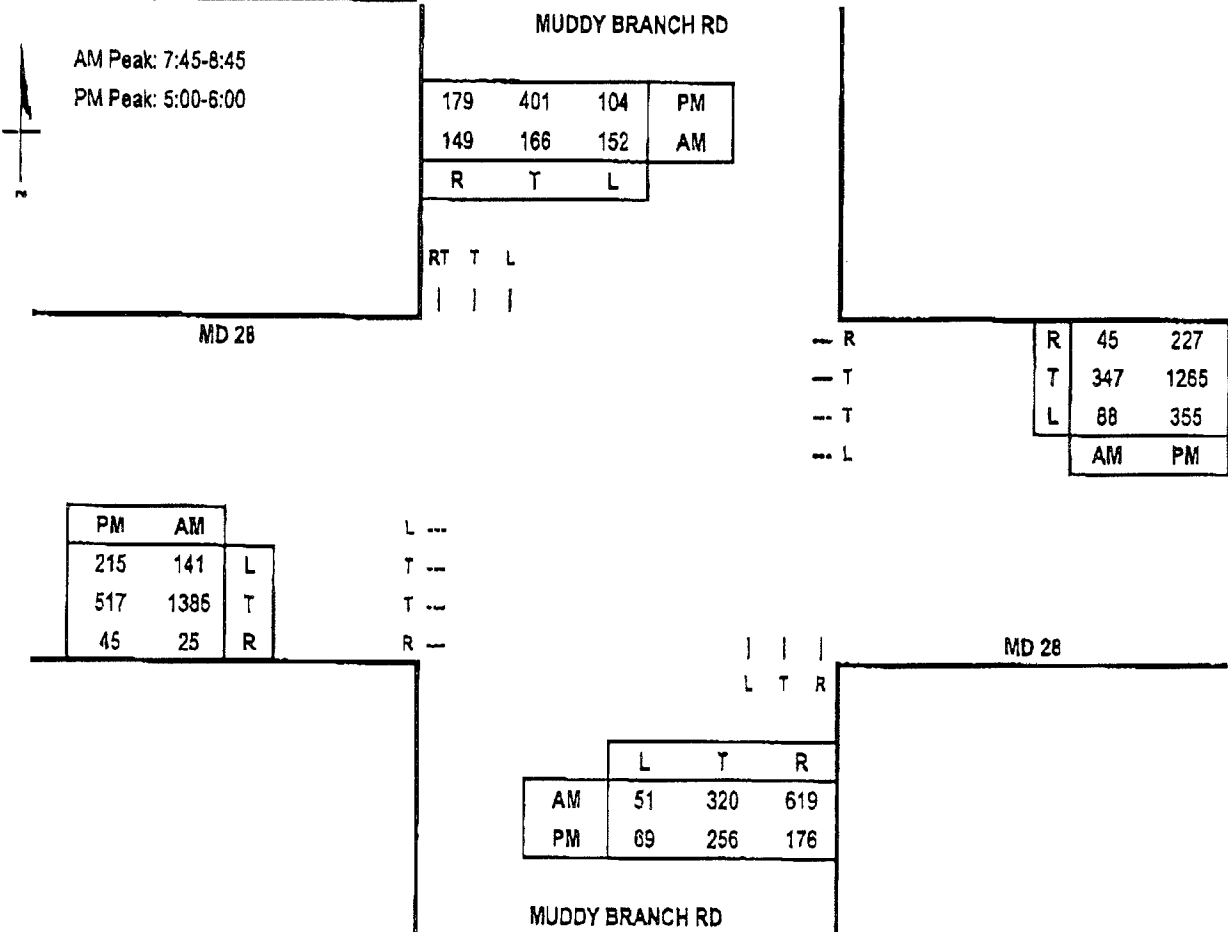
Day of Week: Tuesday

Conditions: 2004 Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	531	1.00	531	152	1.00	152
SB	315	0.53	167	51	1.00	51
EB	1385	0.53	734	88	1.00	88
WB	347	0.53	184	141	1.00	141
CLV TOTAL=						1505
Level of Service (LOS)=						E

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	256	1.00	256	104	1.00	104
SB	580	0.53	307	69	1.00	69
EB	517	0.53	274	355	1.00	355
WB	1265	0.53	670	215	1.00	215
CLV TOTAL=						1261
Level of Service (LOS)=						C

Scenario ID - EXIST8

AM V/C = 0.94

PM V/C = 0.79

SLI, MY DOCUMENTS\CAD\5.XLS-CLV, 05/11/04

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 124

Date of Count: 3/4/2004

and: MD 117

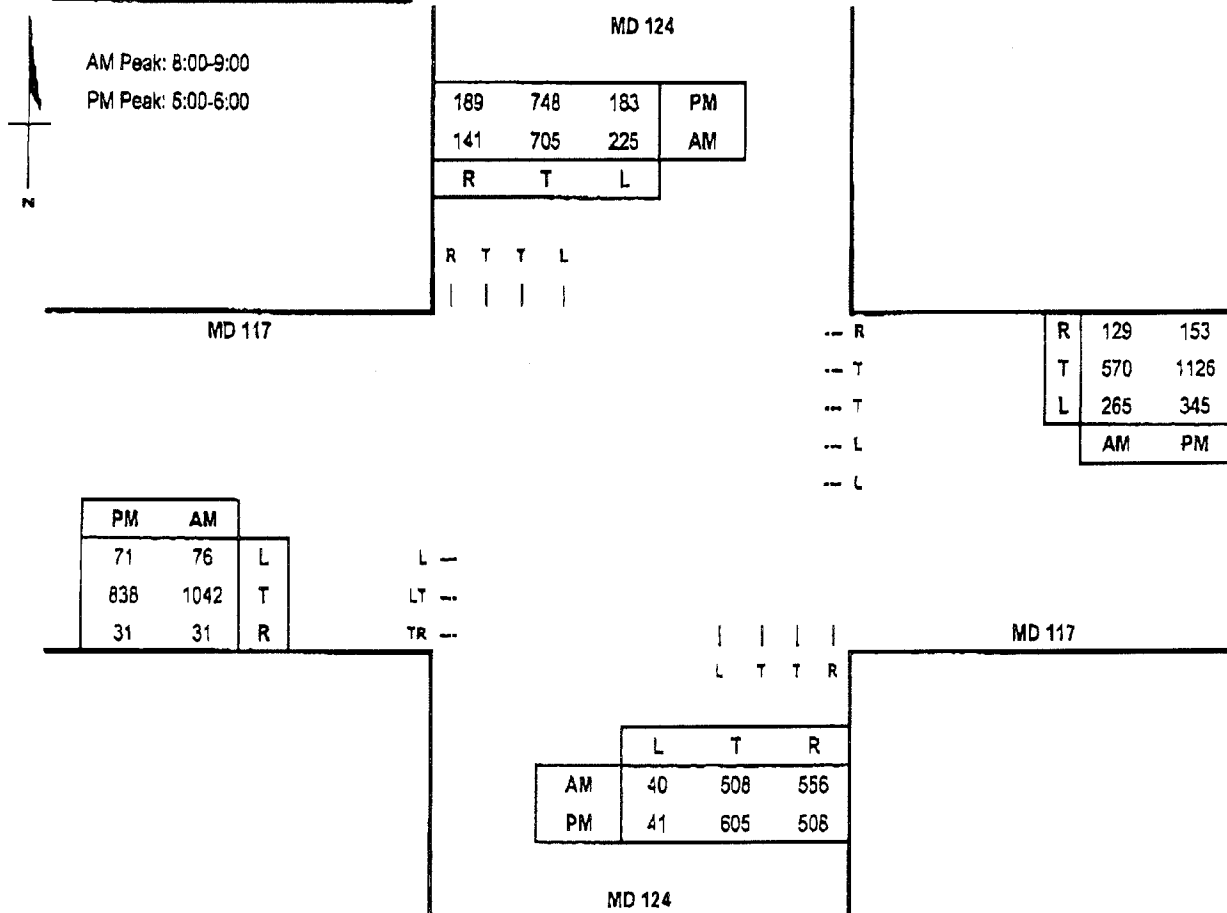
Day of Week: Thursday

Conditions: Existing Traffic

Analyst: Shulin Li



Lane Use + Traffic Volumes



Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	1073	0.53	569				569
WB	570	0.53	302				302
NB	508	0.53	269	225	1.00	225	494
SB	705	0.53	374	40	1.00	40	
CLV TOTAL=							1365
Level of Service (LOS)=							D

AM V/C = 0.85

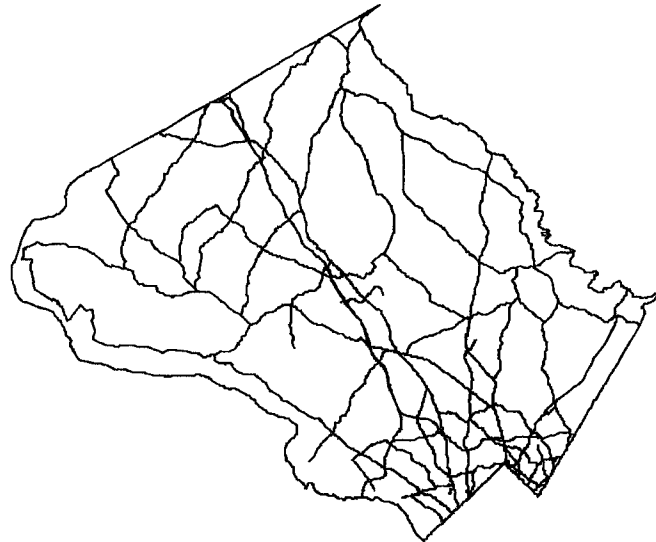
Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	869	0.53	461				461
WB	1126	0.53	597				597
NB	605	0.53	321	183	1.00	183	504
SB	748	0.53	396	41	1.00	41	
CLV TOTAL=							1562
Level of Service (LOS)=							E

PM V/C = 0.98

*Approved
and
Adopted
July 1, 2004*

Local Area Transportation Review Guidelines

*Guidelines of the
Montgomery County Planning Board for the
Administration of the
Adequate Public Facilities Ordinance*



Published by:



**THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION**

Montgomery County Department of Park and Planning
8787 Georgia Avenue
Silver Spring, MD 20910-3760

I. Introduction

A. Background

County Code Section 50-35(k) (the Adequate Public Facilities Ordinance or APFO) directs the Montgomery County Planning Board to approve preliminary plans of subdivision only after finding that public facilities will be adequate to serve the subdivision. This involves predicting future travel demand from private development and comparing it to the capacity of existing and programmed public transportation facilities.

In accordance with the FY 2003-05 Annual Growth Policy adopted by the County Council on October 28, 2003, subdivision applications are subject to only one transportation test called the Local Area Transportation Review (LATR).

B. Policy Areas

The County is divided into separate traffic zones, which are grouped into policy areas (Map 1). The congestion standards established by the County Council and adopted in these Guidelines are set by policy areas (see Table 1). However, in accordance with the adopted Annual Growth Policy for adequacy of public transportation facilities related to preliminary and project plan applications and all other regulatory actions (i.e., zoning, mandatory referral, and special exception) filed after July 1, 2004, the Planning Board will not be required to determine if sufficient residential or non-residential capacity exists within the policy area in which a property is located.

C. Local Area Transportation Review

The *Local Area Transportation Review Guidelines* adopted by the Planning Board are to be used by applicants in the preparation of reports to the Planning Board to determine the requirement for and the scope of a traffic study or review prepared by an applicant for subdivision and mandatory referral cases brought before the Planning Board.

The LATR Guidelines are also recognized as the standard to be used by applicants in the preparation of reports to the Board of Appeals and the Hearing Examiner for special exception and zoning cases brought before these bodies.

Map 1: Policy Areas

The intent of the *Local Area Transportation Review Guidelines* is to establish criteria for determining if development can or cannot proceed. Pursuant to the adopted Annual Growth Policy, the Planning Board must not approve a subdivision if it finds that an unacceptable weekday peak-hour level of congestion will result after taking into account existing roads, programmed roads, available or programmed mass transportation and physical improvements or trip mitigation measures to be provided by the applicant. If the subdivision will affect a nearby¹ intersection for which congestion is already unacceptable, then the subdivision may only be approved if it does not make the situation worse

Table 1: Local Area Transportation Review Intersection Congestion Standards by Policy Area

(As of July 2004)

Congestion (Critical Lane Volume) Standards	Policy Area	
1400	Rural Areas	
1450	Clarksburg Damascus Gaithersburg City Germantown Town Center	Germantown West Germantown East Montgomery Village/Airpark
1475	Cloverly Derwood North Potomac	Olney Potomac R&D Village
1500	Aspen Hill Fairland/White Oak	Rockville City
1550	North Bethesda	
1600	Bethesda/Chevy Chase Kensington/Wheaton	Silver Spring/Takoma Park
1800	Bethesda CBD Friendship Heights CBD Glenmont Grosvenor Shady Grove	Silver Spring CBD Twinbrook Wheaton CBD White Flint

In situations where an unacceptable peak-hour level of congestion will exist, the applicant, in consultation with Transportation Planning staff, the Montgomery County Department of Public Works and Transportation (DPWT) and/or the Maryland State Highway Administration (SHA), should use these procedures to develop recommendations for specific intersection improvements, or pedestrian, bicycle or transit enhancements that would mitigate the transportation impact of the development in these areas of local congestion so that the Planning Board or another elected or appointed body could consider granting approval. The procedures outlined in the LATR Guidelines are intended to provide a near-term snapshot in time of estimated future traffic conditions and to present a reasonable estimate of traffic conditions at the time of development.

¹ See Section 111B1, page 12

II. Criteria for Screening Cases for Local Area Transportation Review

Applicants will be required in most instances to submit a traffic statement with the development application concerning the need for a Local Area Transportation Review (LATR). Transportation Planning staff will use the following criteria to determine whether and when the applicant needs to submit a traffic study.

In cases where an LATR is required (see II.A below), a traffic study must be filed as a part of the development submittal. Transportation Planning staff will review the traffic statement and/or traffic study. If Transportation Planning staff determines, by reviewing the traffic statement, that a traffic study is necessary, but one was not submitted with the filed application, the application will not be considered complete until a traffic study is submitted and found to be complete. Figure 1 is an example of a checklist used by staff for determining the completeness of a traffic study. Any modifications in the analysis identified by Transportation Planning staff's review are the responsibility of the applicant, after appropriate oral and/or written notice of the issues identified or change(s) required. As long as a traffic study is determined to be complete, staff will consider the date of receipt as the completion date. Once a traffic study has been found to be complete, staff will notify the applicant in writing within two weeks and, by copy of that letter, inform representatives of nearby community and/or business groups or associations.

Staff will determine the acceptability of the conclusions and recommendations of a traffic study in consultation with the applicant, DPWT, SHA, and community representatives as part of the review process in preparation for a public hearing.

A. Significantly Sized Project

The proposed development must be of sufficient size to have a measurable traffic impact on a specific local area to be considered in a local area transportation review. Measurable traffic impact is defined as a development that generates 30 or more total (i.e., existing, new, pass-by and diverted) weekday trips during the peak hour of the morning (6:30 a.m. to 9:30 a.m.) and/or evening (4:00 p.m. to 7:00 p.m.) peak period of adjacent roadway traffic.

Figure 1: Check List for Determining the Completeness of Traffic Studies

Development Name: _____	
Development Number: _____	
<input type="checkbox"/>	Stage of Development Approval: _____ (zoning, special exception, subdivision, mandatory referral)
<input type="checkbox"/>	Are the intersections counted for the traffic study acceptable?
<input type="checkbox"/>	Are the traffic counts current; i.e., within one year of date of study?
<input type="checkbox"/>	Were any traffic counts taken on or near holidays?
<input type="checkbox"/>	Are there any "bad" traffic counts? (Compare to other recent counts.)
<input type="checkbox"/>	Are peak hours and lane-use configurations on each intersection approach correct?
<input type="checkbox"/>	Is assumed background development correct?
<input type="checkbox"/>	Do the improvements associated with the development mitigate site traffic and are they feasible? (Applicant should check feasibility of improvements with DPWT and/or SHA staff. Applicant should check the availability of right-of-way if needed for the improvements.)
<input type="checkbox"/>	Are pending/concurrent plans that have been filed in accordance with the LATR Guidelines included in "background development"?
<input type="checkbox"/>	Is the amount of each background development used in the traffic study acceptable, based on the stage of development approval?
<input type="checkbox"/>	Are the trip generation rates used in the traffic study acceptable?
<input type="checkbox"/>	Are the assumptions for % new, % diverted, and % pass-by reasonable?
<input type="checkbox"/>	Is trip distribution/assignment assumed in the traffic study acceptable?
	Office _____ Residential _____
	Other _____ Retail _____
<input type="checkbox"/>	Were the correct lane use factors used?
<input type="checkbox"/>	Are the critical lane volumes calculated correctly?
<input type="checkbox"/>	Are the congestion standards identified correctly?
<input type="checkbox"/>	Is a complete Pedestrian Impact Statement included as part of the traffic study?
<input type="checkbox"/>	Were all traffic counts submitted in the accepted standard digital format?

The following criteria shall be used to determine if a proposed development will generate 30 or more weekday peak-hour trips:

- 1a. For office or residential development, all peak-hour trips are to be counted even if, as part of the analysis, some of the trips will be classified as pass-by trips or trips diverted to the site from existing traffic.
- 1b. For retail development, pass-by trips need not be counted in determining the number of trips generated, but will be used for designing site access and circulation.
2. All land at one location within the County, including existing development on a parcel that is being modified or expanded or land available for development under common ownership or control by an applicant, including that land owned or controlled by separate corporations in which any stockholder (or family of the stockholder) owns ten percent or more of the stock, shall be included. Staff shall exercise their professional judgment in consultation with the applicant in determining the appropriate land area to consider.

For any subdivision that would generate 30-49 weekday peak-hour vehicle trips, the Planning Board, after receiving a traffic study must require that either all LATR requirements are met or the applicant must make an additional payment equal to 50% of the applicable transportation impact tax before it receives any building permit in the subdivision.

In certain circumstances, Transportation Planning staff may, in consultation with the applicant, require analysis of traffic conditions during a different three-hour weekday peak period; e.g., 6:00 a.m. to 9:00 a.m. or 3:30 p.m. to 6:30 p.m., to reflect the location or trip-generation characteristics of the site, existing conditions or background development as generators of traffic.

The number of trips shall be calculated using the following sources:

1. For all land uses in the Silver Spring, Bethesda, or Friendship Heights CBD Policy Areas, use the trip generation rates in Appendix C, Tables C-1 or C-2.
2. For all other land uses in parts of the county not included in 1. above:
 - a. For general office, general retail, residential, fast food restaurant, private school, child day-care center, automobile filling station, senior/elderly housing, or mini-warehouse, use the formulas provided in Appendix A and the tables provided in Appendix B.
 - b. For other land uses, use the latest edition of the *Trip Generation Report* published by the Institute of Transportation Engineers (ITE).

For some land uses of a specialized nature, appropriate published trip-generation rates may not be available. In such cases, Transportation Planning staff may request that determination of rates for these land uses be a part of the traffic study. If special rates are to be used, Transportation Planning staff must approve them prior to submission of the traffic study.

An applicant shall not avoid the intent of this requirement by submitting piecemeal applications or approval requests for zoning, subdivision, special exception, mandatory referral, or building permits. However, an applicant may submit a preliminary plan of subdivision for approval for less than 30 peak-hour trips at any one time provided the applicant agrees in writing that, upon the filing of future applications, the applicant will comply with the requirements of the LATR Guidelines when the total number of site-generated peak-hour vehicle trips at one location has reached 30 or more. Then, a traffic study will be required to evaluate the impact of the total number of site-generated trips in accordance with the LATR Guidelines.

Transportation Planning staff may elect to waive these criteria if the development results in no net increase in weekday peak-hour trips.

B. Congestion Standards

Critical lane volume (CLV) standards for intersections that were adopted for each policy area in the most-recently adopted Annual Growth Policy are shown in Table 1. Transportation Planning staff maintains an inventory of intersection traffic data based upon traffic counts collected by the Montgomery County Department of Public Works and Transportation (DPWT), the Maryland State Highway Administration (SHA), and private traffic consultants for purposes of providing applicants with a preliminary assessment of conditions in the vicinity of the proposed development.

C. Exceptions to the General Guidelines

There are several policy areas where there are exceptions or additions to the general Local Area Transportation Review process:

1. In the Potomac Policy Area, only developments that Transportation Planning staff consider will impact any of the following intersections will be subject to Local Area Transportation Review: a) Montrose Road and Seven Locks Road, b) Democracy Boulevard and Seven Locks Road, c) Tuckerman Lane and Seven Locks Road, d) Bradley Boulevard and Seven Locks Road, e) Democracy Boulevard and Westlake Drive, f) Westlake Drive and Westlake Terrace, g) Westlake Drive and Tuckerman Lane, h) River Road and Bradley Boulevard, i) River Road and Piney Meetinghouse Road, and j) River Road and Seven Locks Road. No other intersections are to be studied.
- 2a. The following policy areas have been designated Metro Station Policy Areas in the most-recently adopted AGP: Bethesda CBD, Friendship Heights CBD, Glenmont, Grosvenor, Shady Grove, Silver Spring CBD, Twinbrook, Wheaton CBD, and White Flint. This designation means that the congestion standard equals a critical lane volume of 1800 (see Table 1) and that development within the area is eligible for the AGP's Alternative Review Procedure for Metro Station Policy Areas (see Appendix D). This procedure allows a developer to meet LATR requirements by 1) agreeing in a contract with the Planning Board and the County Department of Public Works and

Transportation to make a payment as designated in the AGP, 2) participating in and supporting a Transportation Management Organization (TMO) if and when one exists 3) mitigating 50% of their total weekday morning and evening peak-hour trips, and 4) conducting a traffic study to identify intersection improvements and/or trip mitigation measures that would have been required. Both residential and non-residential projects are eligible for the procedure.

- 2b. Development in the above-mentioned Metro Station Policy Areas will be reviewed in accordance with Section V of these guidelines. These procedures provide specific criteria to satisfy the general guidelines included in the adopted Annual Growth Policy (AGP).
3. Area-specific trip-generation rates have been developed for the Bethesda, Friendship Heights, and Silver Spring CBDs. (See Appendix C.)

III. Method and Preparation of Local Area Transportation Review Traffic Study

A. General Criteria and Analytical Techniques

The following general criteria and analytical techniques are to be used by applicants for subdivision, zoning, special exceptions, and mandatory referrals in submitting information and data to demonstrate the expected impact on intersections of public roadways by the vehicle trips generated by the proposed development. In addition to the consideration of existing traffic associated with current development, applicants shall include in the analysis potential traffic that will be generated by their development and other nearby approved but unbuilt development (i.e., background).

The traffic study for a proposed development under consideration by the Planning Board or other public body; e.g., the Board of Appeals, the cities of Rockville or Gaithersburg, must include in background traffic all developments approved and not yet built and occupied prior to the submission of an application.

Transportation Planning staff may require that applications in the immediate vicinity of the subject application submitted in accordance with the LATR Guidelines and filed simultaneously or within the same time frame be included in background traffic, even if the Planning Board has not approved them. If an application is approved after a traffic study has been submitted for another project and both require improvements for the same intersection(s), then the traffic study for the pending application must be updated to account for the traffic and improvements from the approved application.

Information and data on approved but unbuilt developments, i.e., background development, nearby intersections for study, trip distribution and traffic assignment guidelines, and other required information will be supplied to the applicant by Transportation Planning staff within 15 working days of receipt of a written request.

The traffic study should be submitted along with the application or within 15 working days prior to or after the application's submission date. If a traffic study is submitted at the same time as the application, the applicant will be notified concerning the completeness of the traffic study within 15 working days of the Development Review Committee meeting at which the application is to be discussed. If not submitted before the Development Review Committee meeting, Transportation staff has 15 working days after submittal to notify the applicant as to whether or not the traffic study is complete.

For a trip mitigation program or an intersection improvement to be considered for more than one application, the program or improvement must provide enough capacity to allow all the applications participating in the program or improvement to satisfy the conditions of LATR. An intersection improvement may be used by two or more developments if construction of the

improvement has not been completed and open to the public. In order to be considered, the program or improvement must provide sufficient capacity to:

- result in a calculated CLV in the total traffic condition that is less than the congestion standard for that policy area, or
- mitigate the traffic impact if the calculated CLV in the total traffic condition exceeds the intersection congestion standard for the applicable policy area. Mitigation is achieved when the CLV in the total traffic condition that includes traffic from each contributing development *with* the improvement is equal to or less than the CLV in the background traffic condition without the improvement.

When development is conditioned upon improvements, those improvements must be bonded, under construction, or under contract for construction prior to the issuance of building permits for new development. Construction of an improvement by one applicant does not relieve other applicants who have been conditioned to make the same improvement of their responsibility to participate in the cost of that improvement.

If the Planning Board grants an extension to an approved preliminary plan, Transportation Planning staff will determine if the traffic study needs to be updated based on the APF validity period, usually three years, originally approved by the Planning Board.

B. Scope of Traffic Study

At a meeting or in written correspondence with Transportation Planning staff, the following aspects of the traffic study will be proposed by the applicant and/or provided by staff and agreed upon:

1. intersections that are to be included in the traffic study. The number of intersections to be included will be based upon the trips generated by the development under consideration (see Section II.A. for specific criteria regarding “land at one location”). As a general guideline, Table 2 indicates the number of significant signalized intersections from the site in each direction to be included in the traffic study, based on the maximum number of weekday peak-hour trips generated by the site, unless Transportation Planning staff finds that special circumstances warrant a more limited study. For large projects, i.e., greater than 750 peak-hour site trips, the number of intersections shall reflect likely future signalized intersections as determined by staff and the applicant.

Table 2: Signalized Intersections from Site in Each Direction to Be Included in a Traffic Study

Maximum Weekday Peak-Hour Site Trips	Maximum Number of Signalized Intersections in Each Direction
30 – 250	1

250 – 749	2
750 – 1,249	3
1,250 – 1,750	4
>1,750	5

Transportation Planning staff, in cooperation with the applicant, will use judgment and experience in deciding the significant intersections ~~and links~~ to be studied. Interchanges (future) will be afforded special considerations, including ramps/termini being treated as signalized intersections. The urban areas of the county, including Central Business Districts and Metrorail Station policy areas, have more closely-spaced intersections, suggesting that the major intersections be studied.

Transportation Planning staff will consider other factors in reaching a decision regarding the number of intersections to be included in the traffic study, such as:

- geographic boundaries; e.g., parks, interstate routes, railroads
- contiguous land under common ownership
- the type of trip generated; e.g., new, diverted, pass-by
- the functional classification of roadways; e.g., six-lane major highway

- 2a. approved but unbuilt (i.e., background) development to be included in the traffic study. As a general guideline, background development to be included in the traffic study will be in the same geographic area as the intersections to be studied, as discussed in 1) above. Staging of large background developments beyond the typical time period for a traffic study will be considered on a case-by-case basis.
- 2b. active trip mitigation programs, or physical improvements not completed, that have been required of other developments included in background traffic.
3. the adequacy of existing turning movement counts and need for additional data. Generally, traffic counts less than one year old when the traffic study is submitted are acceptable. Traffic counts should not be conducted on a Monday or a Friday, during summer months when public schools are not in session, on federal and/or state and/or county holidays, on the day before or after federal holidays, during the last two weeks of December and the first week of January, or when weather or other conditions have disrupted normal daily traffic.
4. factors, e.g., the specific trip pattern of development, to be used to compute the trip generation of the proposed development and developments included as background
5. the directional distribution and assignment of trips generated by the proposed development and developments included as background, in accordance with the latest publication of “Trip Distribution and Traffic Assignment Guidelines” by Transportation Planning staff (see Appendix E)
6. mode split assumptions, if the traffic study is to include reductions in trips generated using vehicle-based trip factors

7. transportation projects fully funded for construction within four years in the County's Capital Improvement Program (CIP), the State's Consolidated Transportation Program (CTP), or any municipal capital improvements program that are to be included in the analysis, along with techniques for estimating traffic diversion to major new programmed facilities.
8. traffic circulation and/or safety concerns related to site access (generally applied to public or private facilities with 800 or more seats or which can otherwise accommodate 800 or more people during an event)
9. a feasible range of types of traffic engineering improvements or trip mitigation measures associated with implementing the development
10. the number, size, and use of buildings or types of residential units on the site
11. queuing analysis, if required (see Section V)
12. a pedestrian and bicycle impact statement to assure safe and efficient pedestrian and bicycle access and circulation to and within the site, including:
 - a. pedestrian and/or bicycle counts at intersections
 - b. existing and/or proposed sidewalks and/or bikeways adjacent to the site and/or off-site of sufficient width, offset from the curb per county standards
 - c. lead-in sidewalks to the site and connectivity to the local area
 - d. existing and/or proposed bus stops, shelters and benches, including real time transit information
 - e. pedestrian and bicycle accommodations at nearby intersections; e.g. crosswalks, pedestrian signals, push buttons, median refuges, ADA-compatible ramps
 - f. sufficient bicycle racks and/or lockers on site
 - g. recognition of peak pedestrian and/or bicycle activity periods; e.g., evenings related to restaurants.

For a zoning case, Transportation Planning staff may initiate a meeting with the applicant, the Hearing Examiner and interested groups or individuals to establish the scope of the traffic analysis.

*****DRAFT*****

ORDINANCE NO. _____

AN ORDINANCE TO AMEND CHAPTER 24 OF THE CITY CODE
ENTITLED "ZONING" SO AS TO CREATE NEW ARTICLE XV
ENTITLED "ADEQUATE PUBLIC FACILITIES" SO AS TO REQUIRE
THAT PUBLIC FACILITIES BE DEEMED ADEQUATE
TO SERVE DEVELOPMENT WHICH IS SUBJECT TO VARIOUS
LAND USE AND DEVELOPMENT APPROVALS AND TO
SET FORTH APPLICABLE PROCEDURES AND STANDARDS
FOR THE DETERMINATION THEREOF

TEXT AMENDMENT _____

BE IT ORDAINED, by the Mayor and Council of the City of Gaithersburg, Maryland, in public meeting assembled that Chapter 24 of the City Code (City Zoning Ordinance) is hereby amended to create New Article XV entitled "Adequate Public Facilities", Section 24-243 through Section 24-245 to read as follows:

ARTICLE XV. ADEQUATE PUBLIC FACILITIES

Sec. 24-243. Purpose and Intent.

It is the purpose and intent of this Article to:

- (1) Implement the authority granted to the City of Gaithersburg pursuant to Article 66B, §10.01, Md Code Ann.
- (2) Control and manage growth in an orderly, efficient, cohesive and safe manner consistent with the economic and land use planning policies of the City and for the health, safety and welfare of its inhabitants.
- (3) Provide a mechanism and standards to evaluate and ensure that the public facilities hereafter specified are adequate or will be adequate to serve the needs generated by land use development in the development approval process.
- (4) Provide for the phasing or staging of development, conditional approvals including but not limited to requiring provision of public facilities and/or traffic mitigation to ensure the adequacy of public facilities.
- (5) Ensure that premature development does not occur and to require that development approvals are not rendered by an approving authority without a determination of the

- (6) adequacy of public facilities or that such facilities will be made adequate within the reasonable foreseeable future.

Sec. 24-244. Applicability.

- (A) The provisions of this Article shall apply to the following land use and development approvals generating thirty (30) or more peak hour vehicular trips:

- (1) Local map amendments; and
- (2) Sketch Plan and Schematic Development Plan approvals and approvals of amendments thereto; and
- (3) Optional Method Approvals and Approvals of amendments thereto; and
- (4) Concept Plan Approvals in the CD Zone and approvals of amendments thereto; and
- (5) Subdivision and Site Development Plans and amendments thereto where the adequacy of public facilities had not been reviewed in the prior twelve (12) months associated with the approvals listed in (A)(1), (2), (3) and (4) above

- (B) The provisions of this Article shall not apply to the following land use and development approvals:

- (1) For transportation facilities adequacy, any development which generates less than thirty (30) peak hour vehicular trips.

- (2) **OPTION 1. Choose one of the following four (4) waiver provisions:**

- * Where a waiver of the provisions of this Article has been granted **by resolution** by an affirmative vote of **four (4)** members of the City Council upon good cause shown.

OR

- ** Where a waiver of the provisions of this Article has been granted **by resolution** by an affirmative vote of **three (3)** members of the City Council upon good cause shown.

OR

*** Where a waiver of the provisions of this Article has been granted by an ordinance adopted by an affirmative vote of **four (4)** members of the City Council upon good cause shown.

OR

**** Where a waiver of the provisions of this Article has been granted by an ordinance adopted by an affirmative vote of **three (3)** members of the City Council upon good cause shown.

OPTION 2. Add (or omit) the following at the end of option 1 chosen for (B)(2):

“Good cause” shall include, but not be limited to, land use and development approvals related to: impacting economic development, improving blighted areas, improving or constructing community facilities, and acquiring public rights-of-way, as deemed to be in the public interest.

Sec. 24-245. Requirements.

(A) OPTIONS. Choose one of the following three (3) provisions:

* The City Council or the City Planning Commission, as applicable shall not approve an application for those approvals listed in Section 24-244 above where the Level of Service (“LOS”) standards, including but not limited to critical lane volumes (CLV) established by resolution of the City Council for the critical intersections or links identified by City staff relevant to the application and/or development proposed by an applicant are exceeded.

OR

** The City Council or the City Planning Commission, as applicable shall not approve an application for those approvals listed in Section 24-244 above where the Level of Service (“LOS”) standards, including but not limited to critical lane volumes (CLV) established by resolution of the City Council for the critical intersections or links identified by [City staff] the City Council relevant to the application and/or development proposed by an applicant are exceeded.

OR

- *** The City Council or the City Planning Commission, as applicable shall not approve an application for those approvals listed in Section 24-244 above where the Level of Service (“LOS”) standards, including but not limited to critical lane volumes (CLV), established by resolution of the City Council for the critical intersections or links [identified by City staff] relevant to the application and/or development proposed by an applicant are exceeded. The City Manager or his designee shall determine the “critical intersections” or links to be used in calculating whether a proposed development meets the applicable LOS based on the current Local Area Transportation Review Guidelines of the Montgomery County Planning Board as published by the Maryland National Capital Park and Planning Commission and any other guidelines which the City Manager or his designee deems applicable.

(B) OPTIONS. Choose one of the following two (2) provisions:

- * For applications generating thirty (30) or more peak hour vehicular trips, the applicant must submit a traffic impact study using criteria established by the current Local Area Transportation Review Guidelines of the Montgomery County Planning Board as published by the Maryland National Capital Park and Planning Commission, or another professionally recognized source such as the Maryland State Highway Administration or the Institute of Traffic Engineers and shall include total traffic consisting of existing traffic, background traffic (approved but unbuilt projects) and proposed new trips.

OR

- ** For applications generating thirty (30) or more peak hour vehicular trips the applicant must submit a traffic impact study using criteria established by the current Local Area Transportation Review Guidelines of the Montgomery County Planning Board as published by the Maryland National Capital Park and Planning Commission, or another professionally recognized source such as the Maryland State Highway Administration or the Institute of Traffic Engineers and shall include total traffic consisting of existing traffic, background traffic (approved but unbuilt projects) and proposed new trips. The City Manager or his designee shall determine the parameters of the traffic study which shall be utilized to indicate whether a proposed development meets or exceeds the LOS threshold standard imposed by the City Council.

- (C) Where the LOS for total traffic exceeds the LOS threshold standard imposed by the City Council through any critical intersection or link the burden shall be on the applicant to demonstrate:

(1) **OPTIONS. Choose one of the following three (3) provisions:**

- * By the funding or construction (either public or private) of necessary transportation improvements or providing trip mitigation measures that the LOS standards imposed by the City Council will not be exceeded or if the standards are already exceeded, the LOS for total traffic will be reduced by at least five percent (5%) below the LOS for existing plus background traffic or to the established maximum threshold level; and

OR

- ** By the funding or construction (either public or private) of necessary transportation improvements or providing trip mitigation measures that the LOS standards imposed by the City Council will not be exceeded or if the standards are already exceeded, the LOS for total traffic will be reduced [by at least five percent (5%) or] to the established maximum threshold level; and

OR

- *** By the funding or construction (either public or private) of necessary transportation improvements or providing trip mitigation measures that the LOS standards imposed by the City Council will not be exceeded or if the standards are already exceeded, [the LOS will be reduced by at least five percent (5%) or to the established maximum threshold level] the LOS for total traffic will not be increased above the LOS for existing plus background traffic; and

(2) That new trips can be accommodated in a safe and efficient manner.

- D. Where public transportation improvements are relied upon by an applicant to meet the required LOS, those improvements must be identified for funding within the next four (4) years in the applicable Capital Improvement Budget in the current State or County transportation improvements program for funding of construction of said improvements or identified as an approved project in the City Capital Improvement Program.

ADOPTED this _____ day of _____, 2004 by the City Council of Gaithersburg, Maryland.

SIDNEY A. KATZ, Mayor
President of the Council

DELIVERED to the Mayor of the City of Gaithersburg, Maryland, this _____ day of _____, 2004, APPROVED/DISAPPROVED by the Mayor of the City of Gaithersburg, Maryland, this _____ day of _____, 2004.

Sidney Katz, Mayor

THIS IS TO CERTIFY that the foregoing emergency ordinance was adopted by the City Council of Gaithersburg, in public meeting assemble, on the _____ day of _____, 2004 and that the same was approved by the Mayor of the City of Gaithersburg on the _____ day of _____, 2004. This Ordinance will become effective on the _____ day of _____, 2004.

David B. Humpton, City Manager